

embedded in it. The animal pole which was black in colour was exposed at the top. The eggs which were surrounded by gelatinous substance measured 1 mm in diameter.

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25. ON THE SYNONYMY OF *DANIO FEEGRADEI* HORA, 1937
FROM BURMA (PISCES: CYPRINIDAE)*

(With a text-figure)

Danio feegradei Hora was discovered and described from a single specimen from Burma. This species is proposed to be synonymized with *Danio dangila* (Hamilton 1822) in this communication.

INTRODUCTION

Hora (1937) described a new species, *Danio feegradei* based on a single specimen from Sandoway, Lower Burma. He remarked that this species falls intermediate between the genera *Danio* and *Brachydanio* in having 9 branched dorsal fin rays (2/9) and a complete lateral line. Hora & Mukerji (1934) gave a synopsis of the Indian and Burmese species of the cyprinid genus *Danio* Hamilton, including all the species then known in the two subgenera *Danio* and *Brachydanio*. Species having 12-16 branched dorsal fin rays and a complete lateral line were included under the subgenus *Danio*, and species with 7 or less branched dorsal fin rays and incomplete or absent lateral line were included under the subgenus *Brachydanio*. They included 8 species under the subgenus *Danio*. My revisionary study of the cyprinid genus *Danio* shows that 5 species are known viz., *D. dangila* (Hamilton, 1822),

D. aequipinnatus (McClelland, 1839), *D. kakhienensis* Anderson, 1878, *D. naganensis* Chaudhuri, 1912 and *D. neilgherriensis* (Day, 1867) out of the 8 species in which there are 8 to 11 branched dorsal fin rays. Comparative data of these species are shown with special reference to the number of their dorsal and anal fin rays, barbels and lateral line in Table 1. Jayaram (1981) included *D. feegradei* among the members of the subgenus *Brachydanio* without any comment for this inclusion. This species is proposed here as a synonym of *D. dangila* in view of their striking similarities in proportional measurements, meristic counts, squamation, complete lateral line and two pairs of long barbels.

A brief description of *Danio feegradei* Hora is given here.

***Danio feegradei* Hora**

Danio feegradei Hora, 1937, *Rec. Indian Mus.*, 39(4): 325-327, text-fig. 3 (type-locality: Sandoway, Lower Burma). (Fig. 1).

* Part of Ph.D. thesis accepted by the University of Calcutta, Calcutta.

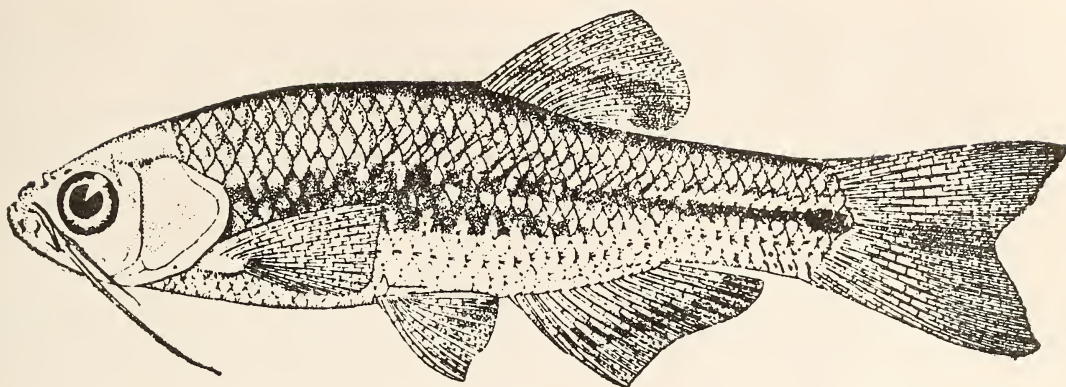


Fig. 1. *Danio feegradei* Hora.

Material: Holotype: 43 mm. SL., Zoological Survey of India, Calcutta Reg. No. F 12477/1. Locality: Sandoway, Lower Burma. Coll.: Lieut. E. S. Feegrade. Date of collection: June-August, 1936.

Description: Head length and body depth 3.90, predorsal distance 1.72, prepelvic distance 2.26, caudal peduncle length 4.77 in standard length. Least depth of caudal peduncle 7.16 in standard length, 1.50 in its length. Depth of head 1.37 and width of head 1.83 in head length. Eye diameter 3.66 in head length, 1.60 in interorbital width. Snout length 4.40 in head length, 1.60 in interorbital width. 2 pairs of well developed barbels, anterior or rostral pair shorter than head and posterior or maxillary pair equal to head length.

Scales: Lateral line complete, covering 39 scales, lateral transverse series of scales at the origin of pelvic fin 10; scales between the lateral line and base of pelvic fin $2\frac{1}{2}$. Predorsal scales 18 and circumpeduncular scales 14.

Fins: D. ii, 9; A. iii, 12; P. i, 11; V. i, 7; C. 19.

Dorsal fin originates nearer to the base of caudal fin than to the tip of snout. Pelvic fin commences on a vertical anterior to dorsal fin. Both the pectoral and pelvic fins possess scaly

flap at their bases on superior margins. Pectoral fin reaches base of pelvic fin. Caudal fin emarginate.

Body part proportions of *D. feegradei* and *D. dangila* are shown in table 2.

Colour in alcohol (from Hora, 1937): Pale olivaceous, dusky dorsal surface with a black streak along the mid-dorsal line. In the middle of the fish there is a black band which is considerably broader anteriorly and terminates posteriorly in a somewhat darker spot at the base of caudal fin. Anteriorly black band is marked, both above and below, with short pearl-white bands and in the posterior region there is a white longitudinal band above it. Dorsal and anal fin rays marked with longitudinal bands across them.

The present state of this specimen of this species preserved in the collection of the Zoological Survey of India, Calcutta is damaged and decolorized; therefore, coloration of the species could not be studied.

Distribution: Burma: so far far known only from Sandoway, Lower Burma.

DISCUSSION

Examination of the type specimen of *D. feegradei* preserved in the collection of the

TABLE 1

MERISTIC COUNTS OF 5 SPECIES OF *Danio* WITH SPECIAL REFERENCE TO NUMBER OF DORSAL AND ANAL FIN RAYS AND ALSO BARBELS AND LATERAL LINE

Name of species	D. fin rays	AA. fin rays	Barbels	Lateral line
<i>D. aequipinnatus</i>	13-15 (2-3/11-12)	16-18 (2-3/14-16)	2 pairs, short	Complete
<i>D. dangila</i>	11-13 (2/9-11)	14-17 (2-3/12-15)	2 pairs, long	Complete
<i>D. kakhienensis</i>	10(2/8)	14(2/12)	1 pair, short	Complete
<i>D. naganensis</i>	10(2/8)	14-15 (2/12-13)	2 pairs, short	Complete
<i>D. neilgherriensis</i>	11-14 (2-3/9-11)	13-14 (2/11-12)	2 pairs, short	Complete

TABLE 2

BODY PART PROPORTIONS OF *D. feegradei* AND *D. dangila*

Characters	<i>D. feegradei</i>	<i>D. dangila</i>
Standard length/Head length	3.90	3.90-4.25
Standard length/Body depth	3.90	3.25-4.00
Standard length/ Predorsal distance	1.72	1.62-1.76
Standard length/ Prepelvic distance	2.26	2.09-2.40
Length of caudal peduncle/ Depth of caudal peduncle	1.50	1.20-1.66
Head length/Eye diameter	3.66	3.00-4.00
Head length/Snout length	4.40	4.00-4.50
Lateral line scales	39	36-40
Predorsal distance	18	16-18
Circumpeduncular scales	14	12-14
Transverse row of scales	10	9-10
Dorsal fin rays	11 (2/9)	11-13 (2/9-11)
Anal fin rays	16 (3/12)	14-17 (2-3/12-15)
Lateral line	Complete	Complete
2 pairs of long barbels	Present	Present
Distribution	Burma	India, Burma and Nepal

D. dangila. From comparison of a large series of specimens of *D. dangila* from different localities of India and Burma with *D. feegradei*, it appears that there is no character that can be considered as differentiating this species from *D. dangila* as shown in Table 2. An analysis of the characters shown in Table 1 also reveals that this species comes very near *D. dangila* among the members of the genus *Danio* by the possession of a complete lateral line, 9 branched dorsal fin rays and 2 pairs of long barbels. Besides this, taxonomically *D. feegradei* should be included among the members of *Danio* and not in *Brachydanio* as was done by Jayaram (1981), since it has 11(2/9) dorsal fin rays and a complete lateral line. Myers (1953) also remarked that *D. feegradei* can be easily identified as a member of *Danio* by the possession of 9 branched dorsal fin rays and a complete lateral line. Therefore, in view of the above mentioned characters it is proposed here to synonymize *D. feegradei* with *D. dangila*.

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ZOOLOGICAL SURVEY OF INDIA,
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R. P. BARMAN

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26. OBSERVATIONS ON INDIAN TRABUTININI SILVESTRI AND PHENACOCCINI SULC (PSEUDOCOCCINAE: PSEUDOCOCCIDAE: HOMOPTERA)

The present study deals with the observations on 6 species representing 6 genera belonging to the tribes Trabutinini and Phenacoccini in India. The two tribes are distinctly separated from each other by the following key characters:

1. Quinquelocular pores and dentate claws entirely absent; body enclosed within the ovisac Trabutinini Silvestri
- Quinquelocular pores or dentate claws or both present; body not enclosed within the ovisac ... Phenacoccini Sulc

Tribe TRABUTININI Silvestri

This tribe is represented by a single genus *Naiacoccus* Green from India.

Genus *Naiacoccus* Green

Ferris (1950) placed this genus in a group including the genera *Amonostherium* Morri-

son, *Trabutina* Marchal and *Nipaeococcus* Sulc. But Bodenheimer (1953) placed it under subfamily Trabutininae. This genus is represented by a single species from India.

Naiacoccus serpentinus Green

In the field, adult females of this species are easily recognized by the presence of an enormously elongated (about 20 mm long) white tubular ovisac in the form of a simple twisted loop within the anterior extremity of which the insect lies concealed. We have observed a heavy infestation of this species on *Tamarix articulata* at Hathras (Aligarh).

Material examined: 5 ♀, INDIA: Uttar Pradesh, Aligarh, Hathras, on *Tamarix articulata* Wall., 26.iv.1978; 8 ♀, Mathura, Farah, 5.v.1978 (R. K. Avasthi).

Tribe PHENACOCCINI Sulc

Koteja (1974) recognized Trabutininae as subfamily of Pseudococcidae and placed under